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## Claims

## What is claimed is:

- 1. A method of improving network database performance comprising the steps of:
  - a) determining whether a first network packet involves a database transaction;
  - b) intercepting the first network packet upon a positive determination in step a);
  - c) determining the nature of the database transaction;
  - d) selectively implementing a database acceleration technique based upon the determination in step c);
  - e) creating a second network packet; and
  - f) selectively masking at least one of the source and destination addresses of the second network packet based upon the determination in step c).
- 2. The method of claim 1 wherein step a) comprises the step of analyzing at least one of the packet's source and destination addresses.
- 3. The method of claim 2 wherein the source and destination addresses are Media Access Control addresses.
- 4. The method of claim 1 wherein step c) comprises the step of determining whether the transaction is a read transaction.
- 5. The method of claim 4 wherein step d) comprises the step of implementing cache coherency techniques upon a negative determination in step c).
- 6. The method of claim 4 wherein upon a positive determination in step c), step d) comprises the step of determining whether the content requested by the read transaction is locally available.
- 7. The method of claim 6 wherein upon determination that the content requested by the read transaction is locally available, step d) further comprises the step of fulfilling the read

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request using locally available data.

- 8. A system for improving network database performance comprising:
  - a) a database server communicatively coupled to the network;
  - b) a client communicatively coupled to the network; and
  - c) a database accelerator communicatively coupled to the network comprising:
    - i) a packet interrogator for determining whether packets on the network are database transaction packets, determining the source and destination addresses of the packets, and determining the nature of the database transactions,
    - ii) a packet interceptor for intercepting database transaction packets, and
    - iii) a transaction accelerator for accelerating transactions between a database server and a client.
- 9. The system of claim 8 wherein the network is an Ethernet network.
- 10. The system of claim 8 further comprising storage communicatively coupled to the network for implementing caching techniques.
- 11. A system for improving network database performance comprising:
  - a) a means for determining whether a first network packet involves a database transaction;
  - b) a means for intercepting the first network packet upon a positive determination in step a);
  - c) a means for determining the nature of the database transaction;
  - d) a means for selectively implementing a database acceleration technique based upon the determination in step c);
  - e) a means for creating a second network packet; and
  - f) a means for selectively masking at least one of the source and destination addresses of the second network packet based upon the determination in step c).